RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: __10/561,691A__
Source: __IFWP__
Date Processed by STIC: __7/11/07__

ENTERED

RAW SEQUENCE LISTING   DATE: 01/11/2007
PATENT APPLICATION: US/10/561,691A   TIME: 10:51:37

Input Set : A:\36759-20005.00.TXT
Output Set: N:\CRF4\01112007\J561691A.raw

```
 4 <110> APPLICANT: Kazakov, Sergei, A.
 5       Dallas, Anne
 6       Kuo, Tai-Chih
 7       Johnston, Brian H.
 9 <120> TITLE OF INVENTION: Polynucleotides Capable of
10       Target-Dependent Circularization and Topological Linkage
12 <130> FILE REFERENCE: 367592000500
14 <140> CURRENT APPLICATION NUMBER: 10/561,691A
15 <141> CURRENT FILING DATE: 2005-12-21
17 <150> PRIOR APPLICATION NUMBER: PCT/US2004/020589
18 <151> PRIOR FILING DATE: 2004-06-25
20 <150> PRIOR APPLICATION NUMBER: US 60/482,653
21 <151> PRIOR FILING DATE: 2003-06-25
23 <160> NUMBER OF SEQ ID NOS: 49
25 <170> SOFTWARE: FastSEQ for Windows Version 4.0
27 <210> SEQ ID NO: 1
28 <211> LENGTH: 74
29 <212> TYPE: DNA
30 <213> ORGANISM: Artificial Sequence
32 <220> FEATURE:
33 <223> OTHER INFORMATION: Synthetic Construct
35 <400> SEQUENCE: 1
36 cgtccgtatg acgagagaag ctgaccagag aaacacacga cgtaagtcgt ggtacattac 60
37 ctggtaacag aggc                                                74
39 <210> SEQ ID NO: 2
40 <211> LENGTH: 69
41 <212> TYPE: DNA
42 <213> ORGANISM: Artificial Sequence
44 <220> FEATURE:
45 <223> OTHER INFORMATION: Synthetic Construct
47 <400> SEQUENCE: 2
48 tgttgttgtt gttgttgttg tgcctatgtc tcagcctctg ttaccaggta atgtaccacg 60
49 acttacgtc                                                     69
51 <210> SEQ ID NO: 3
52 <211> LENGTH: 51
53 <212> TYPE: DNA
54 <213> ORGANISM: Artificial Sequence
56 <220> FEATURE:
57 <223> OTHER INFORMATION: Synthetic Construct
59 <400> SEQUENCE: 3
60 taatacgact cactataggg cagccgtcct cgtccgtatg acgagagaag c        51
62 <210> SEQ ID NO: 4
63 <211> LENGTH: 45
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64 <212> TYPE: DNA
65 <213> ORGANISM: Artificial Sequence
67 <220> FEATURE:
68 <223> OTHER INFORMATION: Synthetic Construct
70 <400> SEQUENCE: 4
71 tatgacgagg acggctggtt gttgttgttg ttgttgttgt tgtgc   45
73 <210> SEQ ID NO: 5
74 <211> LENGTH: 45
75 <212> TYPE: DNA
76 <213> ORGANISM: Artificial Sequence
78 <220> FEATURE:
79 <223> OTHER INFORMATION: Synthetic Construct
81 <400> SEQUENCE: 5
82 tatgacgagg acggctgatt gttgttgttg ttgttgttgt tgtgc   45
84 <210> SEQ ID NO: 6
85 <211> LENGTH: 45
86 <212> TYPE: DNA
87 <213> ORGANISM: Artificial Sequence
89 <220> FEATURE:
90 <223> OTHER INFORMATION: Synthetic Construct
92 <400> SEQUENCE: 6
93 tatgacgagg acggctgagt gttgttgttg ttgttgttgt tgtgc   45
95 <210> SEQ ID NO: 7
96 <211> LENGTH: 45
97 <212> TYPE: DNA
98 <213> ORGANISM: Artificial Sequence
100 <220> FEATURE:
101 <223> OTHER INFORMATION: Synthetic Construct
103 <400> SEQUENCE: 7
104 tatgacgagg acggctgaga gttgttgttg ttgttgttgt tgtgc   45
106 <210> SEQ ID NO: 8
107 <211> LENGTH: 45
108 <212> TYPE: DNA
109 <213> ORGANISM: Artificial Sequence
111 <220> FEATURE:
112 <223> OTHER INFORMATION: Synthetic Construct
114 <400> SEQUENCE: 8
115 tatgacgagg acggctgaga cttgttgttg ttgttgttgt tgtgc   45
117 <210> SEQ ID NO: 9
118 <211> LENGTH: 45
119 <212> TYPE: DNA
120 <213> ORGANISM: Artificial Sequence
122 <220> FEATURE:
123 <223> OTHER INFORMATION: Synthetic Construct
125 <400> SEQUENCE: 9
126 tatgacgagg acggctgaga catgttgttg ttgttgttgt tgtgc   45
128 <210> SEQ ID NO: 10
129 <211> LENGTH: 17
130 <212> TYPE: DNA

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```
131 <213> ORGANISM: Artificial Sequence
133 <220> FEATURE:
134 <223> OTHER INFORMATION: Synthetic Construct
136 <400> SEQUENCE: 10
137 gcttctctcg tcatacg                                    17
139 <210> SEQ ID NO: 11
140 <211> LENGTH: 28
141 <212> TYPE: DNA
142 <213> ORGANISM: Artificial Sequence
144 <220> FEATURE:
145 <223> OTHER INFORMATION: Synthetic Construct
147 <400> SEQUENCE: 11
148 taatacgact cactataggg cagccgtc                        28
150 <210> SEQ ID NO: 12
151 <211> LENGTH: 29
152 <212> TYPE: DNA
153 <213> ORGANISM: Artificial Sequence
155 <220> FEATURE:
156 <223> OTHER INFORMATION: Synthetic Construct
158 <400> SEQUENCE: 12
159 ggtgacacta tgatgcatat gacgaggac                       29
161 <210> SEQ ID NO: 13
162 <211> LENGTH: 60
163 <212> TYPE: RNA
164 <213> ORGANISM: Artificial Sequence
166 <220> FEATURE:
167 <223> OTHER INFORMATION: Synthetic Construct
169 <220> FEATURE:
170 <221> NAME/KEY: misc_feature
171 <222> LOCATION: 1-5, 10, 13-19, 27-35, 41-48, 54, 56-60
172 <223> OTHER INFORMATION: n = A, U, G or C
174 <220> FEATURE:
175 <221> NAME/KEY: misc_feature
176 <222> LOCATION: 6
177 <223> OTHER INFORMATION: n = U, C or G
179 <220> FEATURE:
180 <221> NAME/KEY: misc_feature
181 <222> LOCATION: 7, 11, 49
182 <223> OTHER INFORMATION: n = U or C
184 <220> FEATURE:
185 <221> NAME/KEY: misc_feature
186 <222> LOCATION: 8, 25
187 <223> OTHER INFORMATION: n = A, C or U
189 <220> FEATURE:
190 <221> NAME/KEY: misc_feature
191 <222> LOCATION: 12
192 <223> OTHER INFORMATION: n = A or G
194 <220> FEATURE:
195 <221> NAME/KEY: misc_feature
```

```
      196 <222> LOCATION: (55)...(55)
      197 <223> OTHER INFORMATION: n = A, C or G
      199 <400> SEQUENCE: 13
W--> 200 nnnnnnnngn nnnnnnnnnc auuanannnn nnnnncaaag nnnnnnnnng aagnnnnnnn 60
      203 <210> SEQ ID NO: 14
      204 <211> LENGTH: 22
      205 <212> TYPE: RNA
      206 <213> ORGANISM: Artificial Sequence
      208 <220> FEATURE:
      209 <223> OTHER INFORMATION: Synthetic Construct
      211 <400> SEQUENCE: 14
      212 guucucuuca agggacaagg cu                                        22
      214 <210> SEQ ID NO: 15
      215 <211> LENGTH: 119
      216 <212> TYPE: RNA
      217 <213> ORGANISM: Artificial Sequence
      219 <220> FEATURE:
      220 <223> OTHER INFORMATION: Synthetic Construct
      222 <400> SEQUENCE: 15
      223 guccuguccg uaugacagag aagucaacca gagaaacaca cguuguggua uauuaccugg 60
      224 ucaagagaag uucccuguuc cuuuuuuucc cgagccuugu cccuugaaga gaacugacc 119
      226 <210> SEQ ID NO: 16
      227 <211> LENGTH: 139
      228 <212> TYPE: RNA
      229 <213> ORGANISM: Artificial Sequence
      231 <220> FEATURE:
      232 <223> OTHER INFORMATION: Synthetic Construct
      234 <220> FEATURE:
      235 <221> NAME/KEY: misc_feature
      236 <222> LOCATION: (82)...(101)
      237 <223> OTHER INFORMATION: n = A, G, C or U
      239 <400> SEQUENCE: 16
      240 gggcagccgu ccucguccgu augacgagag aagcugacca gagaaacaca cgacguaagu 60
W--> 241 cgugguacau uaccugguaa cnnnnnnnnn nnnnnnnnnn ngagaauaac aacaacaaca 120
      242 acaaccagcc guccucguc                                             139
      244 <210> SEQ ID NO: 17
      245 <211> LENGTH: 122
      246 <212> TYPE: RNA
      247 <213> ORGANISM: Artificial Sequence
      249 <220> FEATURE:
      250 <223> OTHER INFORMATION: Synthetic Construct
      252 <220> FEATURE:
      253 <221> NAME/KEY: misc_feature
      254 <222> LOCATION: (74)...(93)
      255 <223> OTHER INFORMATION: n = A, G, C or U
      257 <400> SEQUENCE: 17
      258 guccucgucc guaugacgag agaagcugac cagagaaaca cacgacguaa gucgugguac 60
W--> 259 auuaccuggu aacnnnnnnn nnnnnnnnnn nnngagaaua acaacaacaa caacaaccag 120
      260 cc                                                              122
```

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Input Set : A:\36759-20005.00.TXT
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```
262 <210> SEQ ID NO: 18
263 <211> LENGTH: 142
264 <212> TYPE: RNA
265 <213> ORGANISM: Artificial Sequence
267 <220> FEATURE:
268 <223> OTHER INFORMATION: Synthetic Construct
270 <220> FEATURE:
271 <221> NAME/KEY: misc_feature
272 <222> LOCATION: (121)...(125)
273 <223> OTHER INFORMATION: n = A, C, G or U
275 <400> SEQUENCE: 18
276 gggcagccgu ccuggaccgu auguccagag aagcugacca gagaaacaca cgacguaagu 60
277 cgugguacau uaccugguaa cagaggcuga gacauaggca caacaacaac aacaacaaca 120
W--> 278 nnnnncagcc guccucguca ua                                 142
280 <210> SEQ ID NO: 19
281 <211> LENGTH: 10
282 <212> TYPE: RNA
283 <213> ORGANISM: Artificial Sequence
285 <220> FEATURE:
286 <223> OTHER INFORMATION: Synthetic Construct
288 <400> SEQUENCE: 19
289 ugucucagcc                                                  10
291 <210> SEQ ID NO: 20
292 <211> LENGTH: 10
293 <212> TYPE: RNA
294 <213> ORGANISM: Artificial Sequence
296 <220> FEATURE:
297 <223> OTHER INFORMATION: Synthetic Construct
299 <400> SEQUENCE: 20
300 agucucagcc                                                  10
302 <210> SEQ ID NO: 21
303 <211> LENGTH: 10
304 <212> TYPE: RNA
305 <213> ORGANISM: Artificial Sequence
307 <220> FEATURE:
308 <223> OTHER INFORMATION: Synthetic Construct
310 <400> SEQUENCE: 21
311 acucucagcc                                                  10
313 <210> SEQ ID NO: 22
314 <211> LENGTH: 10
315 <212> TYPE: RNA
316 <213> ORGANISM: Artificial Sequence
318 <220> FEATURE:
319 <223> OTHER INFORMATION: Synthetic Construct
321 <400> SEQUENCE: 22
322 acacucagcc                                                  10
324 <210> SEQ ID NO: 23
325 <211> LENGTH: 10
326 <212> TYPE: RNA
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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 01/11/2007
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Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:13; N Pos. 1,2,3,4,5,6,7,8,10,11,12,13,14,15,16,17,18,19,25,27,28,29
Seq#:13; N Pos. 30,31,32,33,34,35,41,42,43,44,45,46,47,48,49,54,55,56,57,58
Seq#:13; N Pos. 59,60
Seq#:16; N Pos. 82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100
Seq#:16; N Pos. 101
Seq#:17; N Pos. 74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93
Seq#:18; N Pos. 121,122,123,124,125

VERIFICATION SUMMARY   DATE: 01/11/2007
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```
L:200 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
L:241 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:60
L:259 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:60
L:278 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:120
```